

REMARKS

In the Office Action dated June 13, 2008, the Examiner objected to claim 8; objected to the specification; rejected claims 1, 5, 6, 10, 14, and 15 as anticipated by Warner (US 4339152); and rejected claims 4 and 13 as obvious in view of Warner; indicated that claims 7 and 16 would be allowable if re-written in independent form; and indicated that claim 8 would be allowable if re-written to overcome the objection. Applicants respectfully respond as follows.

Objection to claim 8

Claim 8 has been amended to address the ground for objection and to improve the language of the claim. The scope of the claim has not been changed and no new matter has been added.

Objection to the specification

The specification has been amended to correct the citation of US patent 4,544,207.

Rejection of claims 1, 5, 6, 10, 14, and 15 as anticipated by Warner

Claim 1 has been amended to require that the size of the lift gas bubbles is reduced by flowing the lift gas bubbles through the orifices. Support for this recitation can be found in the original specification at page 7, line 31 to page 8, line 6.

In contrast, the system of Warner is not a bubble breaker at all and does not reduce bubble size. The system of Warner functions by retaining the gas beneath each plate element 50, 51, 52 and causing bubbles to coalesce there. Even though Warner refers to elements 50, 51, 52 as “mixer elements,” it is clear from the drawings and text that the upward-flowing gas in Warner is trapped on the underside of each mixer element. See col. 5, lines 29-28. The mixing in Warner occurs in the large gas bubble 60, and is not influenced by the configuration of the openings in the “mixer element.” Far from using elements 50, 51, 52 to reduce bubble size, Warner uses elements 50, 51, 52 to increase bubble size. See col. 5, ll. 49-51, which reads, “*Sufficient mixer elements are used to trap substantially all of the injected oxygen to prevent oxygen from bubbling to the surface.*” Thus, claim 1 as amended is distinguishable from the method disclosed by Warner.

Applicants therefore respectfully submit that claim 1 and the claims that depend from it are therefore allowable over the art of record.

Claim 10 has been amended to recite that the ratio between the injected flux of lift gas and the flux of crude oil is less than 400 standard cubic meters per cubic meter. As this feature was included in allowable claim 8, Applicants believe that it likewise distinguishes claim 10 over the art of record.

Rejection of claims 4 and 13 as obvious in view of Warner

Claims 4 and 13 are allowable for the reasons set out above with respect to claims 1 and 10, respectively.

Claims 7 and 16

Applicants agree that claims 7 and 16 would be allowable if re-written in independent form, but has deferred placing those claims in independent form pending review of the present amendments.

Claim 8

As mentioned above, claim 8 has been amended to correct the ground for objection and to improve the readability of the claim. Its scope has not changed and Applicants respectfully submit that it now in condition for allowance.

Conclusion

Applicants respectfully request entry of the amendments and allowance of the amended claims of this application. Should the Examiner find any impediment to the allowance of this case that could be corrected by a telephone interview, the Examiner is requested to telephone the undersigned.

Respectfully submitted,
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